# *ІНТЕГРАЦІЯ ЛОКАЛЬНИХ ІДЕНТИЧНОСТЕЙ В ЗАГАЛЬНОУКРАЇНСЬКИЙ ТА ЄВРОПЕЙСЬКИЙ ПРОСТІР: СУСПІЛЬНО-ПОЛІТИЧНІ ТА ЕКОНОМІЧНІ АСПЕКТИ*

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## ECOLOGICAL TERMINOLOGY IN MODERN ENGLISH

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## ЕКОЛОГІЧНА ТЕРМІНОЛОГІЯ В СУЧАСНІЙ АНГЛІЙСЬКІЙ МОВІ

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***Abstract.*** *The article is devoted to the study of the features of environmental terminology in modern English. The article deals with the problems of the emergence of a new vocabulary of environmental topics in connection with the accelerated development of the science of Ecology. The process of adding many new words to environmental terminology is actively continuing.*

***Key words:*** *ecology, ecological term, ecological terminology, English-language ecological terminology, vocabulary layer.*

***Анотація.*** *Стаття присвячена дослідженню особливостей екологічної термінології в сучасній англійській мові. Розглянуто проблеми появи нової лексики екологічної тематики у зв’язку з прискореним розвитком науки екології. Процес поповнення екологічної термінології багатьма новими словами активно триває.*

***Ключові слова:*** *екологія, екологічний термін, екологічна термінологія, англомовна екологічна термінологія, пласт лексики.*

The ecological problems of the modern world are of serious interest to mankind. The accelerated development of the science of ecology to solve the ecological disaster

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has led to the replenishment of environmental terminology with many new words. This process is actively continuing. In modern dictionaries, the appearance of new vocabulary is regularly recorded.

The relevance of the article is determined by the increased interest in the environmental terminology, English terminology in ecology and the need for a comprehensive description and analysis of environmental vocabulary [2].

The object of the research is English environmental terminology.

The subject of the research is the English terminological units used in the system of ecology and the description of their features.

The purpose of the research is to analyze modern terms of ecology, to identify certain thematic groups into which the studied vocabulary can be divided.

The research material is a selection of terms on environmental topics from dictionaries and popular scientific articles from Internet sources.

The novelty of the research is an attempt to describe the modern English environmental terminology.

The theoretical basis of the research is the ideas of domestic and foreign language scholars in the field of science which studies terms (O.S. Akhmanova, I.V. Arnold, V.A. Vinogradov, E.A. Latyshevskaya, D.S. Lotte, S.V. Ovseychik and others). Scientists have studied term-forming mechanisms and separate thematic groups of the ecological term system of the English language (T.A. Alesenko, I.G. Guseva, N.G. Kantysheva, M.A. Kovyazina, A.M. Ivashchishin); innovative processes in the vocabulary of the ecological sphere of modern English (E.G. Balyuta). Attempts are made to study comprehensively environmental terminology from the standpoint of Translation Studies in order to develop adequate ways to reproduce it in the texts of various types (Y.A. Zatsny).

The word «ecology» comes from the Greek «oikos» (house, the immediate environment of a person) and «logos» (science), that means ecology is engaged in the study of the «natural house», the organisms living in it (including humans) and all the processes that make this «house» suitable for life.

This term was first used by the German biologist E. Haeckel in 1886 in the work «*Generelle Morphologie des Organismen*». By «ecology», E. Haeckel meant the sum of knowledge pertaining to the economy of nature: the study of the totality of an animal's relations with its environment, both organic and inorganic, and first of all its friendly or hostile relations with those animals and plants with which it comes into direct or indirect contact. In a word, ecology is the study of all the complex relationships that Darwin calls the conditions that give rise to the struggle for existence.

For the last decades of the twentieth century, one of the definitions given in Webster's complete dictionary is particularly suitable. The subject of ecology is understood as the totality or structure of relations between organisms and their environment. The best definition of this vast concept is probably the shortest and least specific, namely «environmental biology» or «environmental biology».

Since the first half of the XX century, ecology has been the point at which the ideas of geneticists, physiologists, mathematicians, agronomists and livestock breeders

intersected.

Currently, there are several sections of ecology. Along with the agricultural environment has been the development of the bio-ecology, geo-ecology, soil ecology, social ecology, urboecology, medical ecology, etc.

The specificity of modern ecology is that it has turned from a strictly biological science into a cycle of knowledge of all scientific disciplines [2].

The man-made impact on nature has reached unprecedented proportions. Therefore, in recent years, ecology has come to be understood as the protection of nature and the environment.

Under the environmental term, we understand the standard unit of a special name that serves the professional (scientific) sphere of the modern conceptual and terminological system «Ecology».

The enrichment of ecological terminology is due to terms of Greek-Latin origin, borrowings from the modern language and the means of the native language.

The linguist scientist E.A. Latyshevskaya believes that the source of replenishment of English environmental terminology is borrowing, neologisms, terminologization and metaphorization of common vocabulary and identifies 6 thematic groups. In her opinion, the largest group is represented by environmental factors, followed by legal aspects of ecology; protection of soils, water resources and the air basin; treatment facilities; organizations whose activities are related to environmental protection; waste and technologies for their utilization or recycling.

We propose to supplement her research with some more groups: «soil ecology» and «ecological plant protection», because we believe that this is an important problem in the context of globalization, population growth and the increasing role of plant cultivation for the sustenance (feed) of mankind.

E.A. Latyshevskaya distinguishes: simple terms, complex terms, multicomponent terms and abbreviations.

Analyzing complex terms of the 2 components the most widely used in Modern English are:

- *bio (biosphere, biodiversity, biocenosis, biogeocenosis)*;
- *eco (ecofriendly, ecosystem, ecopolitics)*;
- *water (waterfall, waterfinder, waterfowl, waterfront, waterproof).*

The most active model, according to E.A. Latyshevskaya [2, p. 12], is the structural model $N + N = N$ (where $N$ is a noun).

The diversity of scientific fields has contributed to the emergence and development of new concepts, and hence their terms: *geographical* or *landscape ecology*, *global ecology* (*megaecology, the study of the Earth's biosphere*), *ecology of microorganisms, fungi, plants, animals, humans, agricultural ecology, industrial or engineering ecology, general ecology, ecology of land, fresh water, marine ecology, chemical ecology*, etc. There are also *analytical* and *dynamic ecology*, *historical* and *evolutionary ecology*, and *social ecology* in the system of human ecology.

Modern dictionaries provide several more concepts related to the term «ecology»:

*geochemical ecology*, *urban ecology*, *carcinogenesis ecology* or *oncological ecology*, *space ecology*, *medical ecology*, *applied ecology* and others.

With the growing number of environmental studies, the first attempts to apply environmental knowledge to agriculture, forestry and other areas of human activity are emerging.

Elton's work «*Animal ecology*» (1927) is the first attempt to establish the theoretical foundations of Ecology.

A great contribution to the formation and development of ecology as a science belongs to scientists who create terms, give them a new sound from a semantic point of view, modernize or reject them. The term «*soil class*» (introduced by V.V. Dokuchaev), the terms: «*field of existence of life, organized shell, organization of the biosphere, biogeochemical cyclicity, maximum manifestation of life, biogenic cycles*» (V.I. Vernadsky); the term «*ecological revolution*» was proposed by Max Nicholson.

In the twentieth century, the object of Environmental research was a complex of living beings (ecosystem), including humans, interacting with the environment.

A significant contribution to the development of the conceptual apparatus of ecology is made by British scientists who introduced such terms as «*ecosystem*» (A. Tensley, 1935), «*ecological niche*», «*ecological pyramid*» (C. Elton, 1927); Russian ecologists who introduced the concepts and terms «*biological complex*» (A.N. Beketov, 1896), «*biogeocenosis*» (V.M. Sukachev, 1944), and also offered their interpretation of the content of the concepts of «*biosphere*» and «*noosphere*» (V.I. Vernadsky).

Some linguists define a wide range of concepts that characterize human interaction with the environment, and divide them into three main thematic areas: «Global Ecology», «Nature Management» and «Human Ecology».

«Global Ecology» – include natural phenomena that affect nature and humans: *climate change, earthquakes*;

«Nature Management» – include *rational use* and *reproduction* of *Natural Resources, nature protection*;

«Human Ecology» – include *human activity*, *relationship with flora and fauna*, *man-made impact, waste*, their *use* and *neutralization, water* and *air pollution*.

The most productive way of term formation in English environmental terminology is considered to be ***multicomponent*** terminological phrases [2, p. 8].

Most scientists divide environmental texts into three types according to the thematic criterion:

1) nature-oriented (*biosphere, biodiversity, ecosystem, natural selection*);

2) techno-oriented (*technosphere, manufacture, nuclear power, man-made accident*);

3) socially oriented (*anthrosphere, sustainable development, ecopolitics, ecological consciousness*).

From the standpoint of translation in environmental terminology the following terms are distinguished:

1) environmental terms (*habitat, dew point, neritic zone*);

2) environmental realities (*Yellow Stone National Park, Good Friday Earthquake, Alaska oil spill*);

3) ecological symbols (taking into account national and cultural conditionality) that can be ethnospecific (*three Male Island accident, Chernobyl accident) and universal (nuclear winter, global warming, Mother Earth*);

4) environmental terms-concepts (*nature protection, nature management*).

The vocabulary of modernity includes such active vocabulary: *Solar panels, global warming, depletion of natural resources, melting glaciers, toxic waste, the wind turbines are frozen, volcanic eruption.*

Eg:

***Global warming*** *is the unusually rapid increase in Earth's average surface temperature over the past century primarily due to the greenhouse gases released by people burning fossil fuels* [10].

*Natural and human-induced disasters, the* ***degradation of ecosystems*** *and the* ***depletion of natural resources*** are also major causes of food insecurity [14].

*Numerous scientists have been crying out loud about the* ***melting of glaciers*** *and how it can adversely impact the entire* ***ecological structure of the planet*** [13].

*Gas and power prices have spiked across the central U.S. while Texas regulators ordered rolling blackouts Monday as an Arctic blast has* ***frozen wind turbines****. Herein is the paradox of the left's* ***climate agenda****: The less we use fossil fuels, the more we need them.*

*Texas's energy emergency could last all week as the weather is forecast to remain frigid. «My understanding is, the* ***wind turbines are all frozen****»* [12].

*Wind's share has tripled to about 25% since 2010 and accounted for 42% of power last week before the freeze set in. About half of Texans rely on electric pumps for heating, which liberals want to mandate everywhere. But the pumps use a lot of power in frigid weather. So while* ***wind turbines were freezing****, demand for power was surging* [12].

*California progressives long ago banished coal. But a heat wave last summer strained the state's power grid as wind flagged and solar ebbed in the evenings. After imposing rolling* ***blackouts****, grid regulators resorted to importing coal power from Utah and running diesel emergency generators.*

*Liberals claim that prices of renewables and fossil fuels are now comparable, which may be true due to subsidies, but they are no free lunch, as this week's energy emergency shows. The Biden Administration's plan to banish fossil fuels is a greater existential threat to Americans than* ***climate change*** [12].

*The wholesale price of electricity spikes 10,000% in a Texas power outage. Among other problems, the* ***wind turbines are all frozen*** [11].

Currently, ecology has become widespread in many countries of the world and is becoming increasingly practical. The main reason for the growing interest in ecology - the science of biological systems at the level of its close relationship with the most important problems of the modern world: the threat of resource depletion, pollution and poisoning of the environment with industrial waste and destruction of natural

communities.

In our field of vision were: the main terms and common words of the English language that have a specific meaning in Ecology; scientific terms from related fields were also often found.

The results of the research can be used in the training of translators in the field of professional communication, in solving international problems in the field of ecology.

## References

1. Григорьева Е.А. Современное понимание системных понятий и терминов в экологии. *Омский научный вестник. Серия «Общество. История. Современность».* Омск: ОмГУ, 2012. №2 (106). С. 152-155.

2. Латышевская Е.А. Становление и развитие терминов системы экология в английском языке : диссертация ... кандидата филологических наук : 10.02.04 / Латышевская Екатерина Аркадьевна. Омск, 2012. 145 с.

3. Англо-русский экологический словарь : ок. 35500 терминов. [Под ред. Г. Н. Акжигитова] М. : Русский язык, 2001. 603 с.

4. Англо-русский экологический словарь. М., 1996. 781 с.

5. Терминологичесикй словарь по экологии, геоботанике и почвоведению. Л., 1988. 248 с.

6. Толковый словарь по охране природы: [Под редакцией В.В. Снакина]. М., 1995. 189 с.

7. Holly Fretwell Public-Private partners restore wetland. URL: http://perc.org/articles/ public-private-partners-restore-wetland

8. Roger A. Rosenblatt Ecological Change and the Future of the Human Species: Can Physicians Make a Difference? URL: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1466851/

9. Science Highlights: Ecological Effects of Climate Change. URL: https://www.nceas.ucsb.edu/science/climate

10. URL: https://earthobservatory.nasa.gov/features/GlobalWarming

11. URL: https://www.bbc.com/news/world-56085733

12. URL: https://whotrades.com/people/474441518/timeline/5921539?showMore=1

13. URL: https://www.climate-change-guide.com/melting-glaciers.html

14. URL: https://context.reverso.net/%D0%BF%D0%B5%D1%80%D0%B5%D0%B2%D0%BE%D0%B4/%D0%B0%D0%BD%D0%B3%D0%BB%D0%B8%D0%B9%D1%81%D0%BA%D0%B8%D0%B9-%D1%80%D1%83%D1%81%D1%81%D0%BA%D0%B8%D0%B9/depletion+of+natural+resources